

Commercial Development Plan for the International Space Station

Final Draft
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Objective

- **Long Term:** To establish the foundation for a marketplace and stimulate a national economy for space products and services in low-Earth orbit, where both demand and supply are dominated by the private sector.
- **Short Term:** To begin the transition to private investment and offset a share of the public cost for operating the space shuttle fleet and space station through commercial enterprise in open markets.

Strategy

- In partnership with the private sector, initiate a set of pathfinder business opportunities which can achieve profitable operations over the long run without public subsidies. Employ these businesses to break down market barriers in the near term and open the path for economic expansion.
- Initialize the process through the internal NASA study of pathfinder candidates, as a point-of-departure, with emphasis on pushing the envelope in terms of both public and private sector policies, procedures and cultural predispositions [*study results provided in attachment 1*].

Tactics

1. ***Release Baseline Pathfinder Study with NASA Assessment of Goods and Services with Commercial Potential.***
 - Identify nine pilot business areas for private sector validation [*completed*].
 - Initiate business development in partnership with industry.
2. ***Commission an Independent Market Assessment to Initiate the Most Effective Pathfinders (Horizon: 6 Months)***
 - Task a nationally prominent business school with recognized high technology acumen, through a new cooperative agreement, to evaluate the prospect of the space station becoming a fee-for-service commercial technology development testbed.
 - Task SpaceVest, through existing cooperative agreement, to evaluate the private investment potential in emerging markets for space products and services which could be enabled through access to space shuttle, shuttle replacements and space station accommodations.
 - Task the United Space Alliance, through existing contract, to evaluate the prospect of space shuttles and space station as platforms for commercially provided products and services.
 - Task the Boeing Aerospace Corporation, through existing contract, to evaluate the prospect of the space station as a customer for commercially provided growth elements, distributed systems, and utility services.

- Task the Commercial Space Centers, through existing cooperative agreements, to query their existing 135 industrial affiliates and evaluate the prospect of the space station becoming a fee-for-service product development laboratory or production center.
- Task the KPMG Peat Marwick Space and High Technology Practice, through existing contract, to convene a panel composed of representatives from each of the previously identified areas, and others as needed, to review the range of market assessments and to synthesize a report on: (a) the market potential; (b) perceived barriers to market entry, and; (c) the most effective pathfinder enterprises.

3. Characterize Barriers to Market Entry and Identify Corrective Actions (Horizon: 6 Months)

Access to Space

- Direct a cross-program team to audit current practices for assigning space shuttle middeck accommodations and establish a minimum set-aside for flight opportunities on every mission [*underway*].
- Appoint a dedicated Senior Assistant for Access to Space, charged to continuously scan for, and secure, alternative flight opportunities on both reusable and expendable launch vehicles [*underway*].
- Benchmark the NASA cost to sortie one dedicated space shuttle mission per year, *Commerce Lab*, until the space station achieves full payload readiness. Identify as an augmentation in the FY 2001 NASA submit to the Office of Management and Budget.

Administrative Process

- Establish a clearing house function at NASA headquarters for the logging and dispositioning of commercial proposals. Implement through an agency-wide Organizational Work Instruction in compliance with ISO-9001 [*draft provided in attachment 2*].

Policy

- Acquire an experienced professional economist to update the 1985 Congressional Budget Office report on “Pricing Options for the Space Shuttles” and the 1994 National Academy of Public Administration report on “A Review of Space Shuttle Costs, Reductions Goals and Procedures”. Benchmark historic marginal and average costs of space shuttle flights, and project costs for space station accommodations.
- Task the KPMG Peat Marwick Space and High Technology Practice to evaluate the effects of transitioning from a cost-based to value-based pricing policy with provisions for government cost offsets, and define objective methods for establishing value.
- Task the NASA Office of Policy and Plans and Office of Public Affairs to: (1) acquire the services of a recognized firm in the practice of name brand management to evaluate the value of space program associations in advertising and customer relations, and; (2) initiate a review of NASA practices related to commercial enterprises involving public service sponsorships, expressed or implied endorsements, or other situations which affect public perception of the nation’s space program.

- Implement the pathfinder strategy as a forcing function to advance policies which will enable the commercial development of space shuttle and space station.

Intellectual Property

- Task the NASA Office of General Counsel to complete a reference guide discussing the statutory, regulatory and programmatic strictures on the deployment, utilization and ownership of intellectual property within the space station program.
- Building on General Accounting Office audit #707379 of technology control plans for the space station, task the NASA Office of General Counsel to review agency policy related to the handling and treatment of proprietary data. If necessary, issue a NASA Policy Directive to correct any deficiencies.

4. ***Establish a Non-Government Organization for Space Station Utilization Development and Management (Horizon: 1+ Year)***

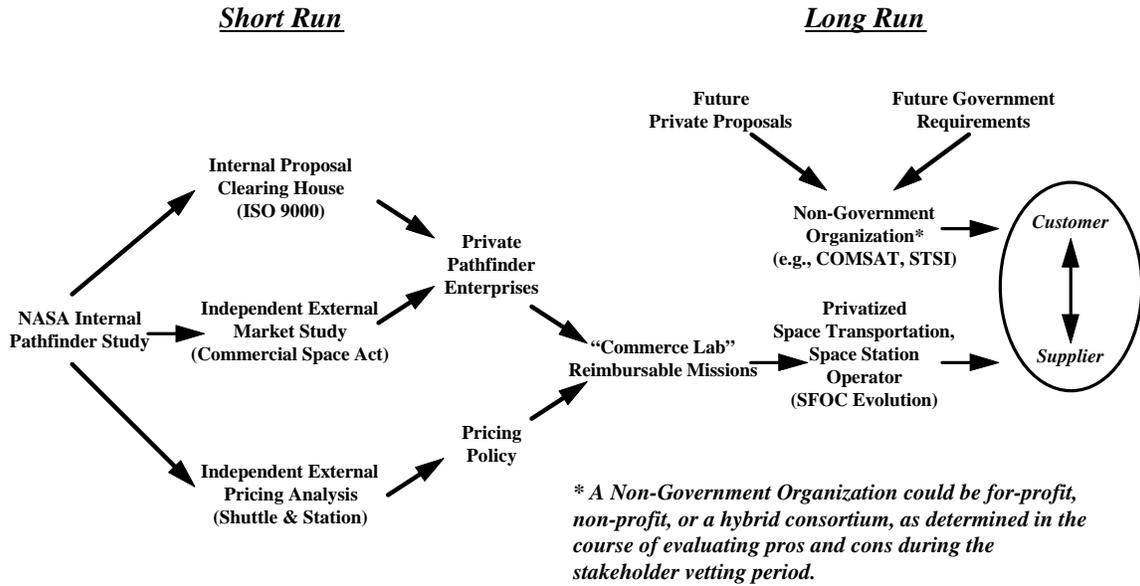
- Develop a reference model to communicate vision, goals, purposes and working principles for a non-government organization (NGO) to manage US utilization of the space station and to reduce cost/schedule impediments at the user-operator interface [*provided in attachment 3*].
- Conduct a comprehensive vetting of stakeholders in the government, academic and industrial sectors, with the objective of elucidating advantages and disadvantages associated with for-profit, non-profit, and hybrid consortium approaches implemented under contractual or cooperative agreements.
- Develop an organizational and telecommunications architecture that will be most effective for evolution to an international scope of operations consistent with the national objectives and existing infrastructure of all partners in the space station program.
- Issue a Request for Proposals and select a NGO in parallel with deployment of the US Laboratory in calendar year 2000.

This plan we have set forth, in concert with the 1998 Commercial Space Act, represents an unprecedented initiative to stimulate business growth in the space sector. With the ongoing support of Congress and the Executive Branch, we look forward with great excitement to the opening of the 21st century and the role of NASA in continuing to push the frontiers of science, technology and economic development.

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Restructuring the Space Economy



Establishing the Customer - Supplier Relationship

